

ELMIRA CAFE AND GROCERY (PWSNO 1090041) SOURCE WATER ASSESSMENT REPORT

November 12, 2002



State of Idaho Department of Environmental Quality

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SOURCE WATER ASSESSMENT FOR ELMIRA CAFE AND GROCERY

Under the Federal Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. The Department of Environmental Quality is completing the assessments for all Idaho public drinking water systems. The assessment for your drinking water source is based on well construction characteristics; site specific sensitivity factors associated with the aquifer the water is drawn from; a land use inventory inside the well recharge zone; and water quality history. For non-community transient water systems like Elmira Cafe and Grocery, recharge zones were generally delineated as a 1000-foot fixed radius around the wells.

This report, *Source Water Assessment for Elmira Cafe and Grocery* describes factors used to assess the well's susceptibility to contamination. The analysis relies on information from the well log; an inventory of land use, well site characteristics, potential contaminant sites identified through a Geographic Information System database search; and information from the public water system file. The ground water susceptibility analysis worksheet for Elmira Cafe and Grocery is attached.

Taken into account with local knowledge and concerns, this assessment should be used as a planning tool to develop and implement appropriate protection measures for this system. **The results should not be used as an absolute measure of risk and are not intended to undermine the confidence in your water system.**

Well Construction. A dug well, 41 feet deep, supplies drinking water for Elmira Café and Grocery and a nearby residence. The Café is by Highway 95 in rural Bonner County, Idaho, about 16 miles north of Sandpoint. The well is in an 8-foot deep concrete lined pit. The 6-inch well casing extends 81 inches above the floor of the pit and is fitted with a vented sanitary well seal. Access to the pit is through a hatch in the cafe laundry room floor.

Required repairs to the system that were noted during a June 2001 sanitary survey of the system have been completed, bringing the system into compliance with *Idaho Rules for Public Drinking Water Systems*.

Well Site Characteristics. Soils in the recharge zone delineated around the Elmira Café and Grocery well are generally poorly drained to moderately drained. Soils in this classification provide some protection against migration of contaminants toward the well.

Potential Contaminant Inventory. Land use inside the Elmira Café and Grocery protection zone is rural residential with homes on individual septic systems. The septic tank for the store, is located 110 feet from the well. Highway 95 and rail lines cross the delineations boundaries. Major transportation corridors are potential sources of every class of regulated contaminants.

Water Quality History. Elmira Café and Grocery has had few water quality problems. The system is required to sample quarterly for total coliform bacteria. In the period from January 1998 through August 2002, the system failed to monitor for bacteria in 4 quarters. Total coliform bacteria were detected in a quarterly sample in April 1999 that was mistakenly drawn from an unused water line. Follow up testing in was negative. Annual nitrate tests from 1994 through 2002 show concentrations ranging between 0.138 and 0.783 mg/l. The Maximum Contaminant Level for nitrate is 10 mg/l. Tests for arsenic and volatile organic chemicals conducted in 2002 were all negative.

Susceptibility to Contamination. An analysis of the Elmira Cafe and Grocery well, incorporating information from the system operator, public water system file and the potential contaminant inventory, ranked the well moderately susceptible VOC, SOC and Microbial contaminants. The well ranked highly susceptible to IOC contamination. Most of the risk factors counted against the well are associated with its relative shallowness. The complete analysis worksheet for your well is on page 6 this report. Formulas used to compute the final susceptibility scores are at the bottom of the worksheet.

Source Water Protection. This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

Continuing to operate and maintain the well in compliance with *Idaho Rules for Public Drinking Water Systems* is the most important drinking water protection measure for Elmira Café and Grocery.

The system might find it helpful to develop a maintenance and testing schedule for itself so important tasks are attended to in a timely manner. Another voluntary measure the system should consider is preparation of an emergency response plan. There is a simple, fill-in-the-blanks form available on the DEQ website (www.deq.state.id.us/water/water1.htm) to guide systems through the emergency planning process.

Elmira Café and Grocery should also investigate voluntary ground water protection programs like Home*A*Syst. The program helps well owners assess everyday activities for their potential impact on drinking water quality. Topics include septic tank management, petroleum product storage, handling and storing lawn and household chemicals and similar activities. Because Elmira Cafe and Grocery may not have direct jurisdiction over the entire recharge zone for its well, it will be important to form partnerships with neighboring landowners, and public agencies to regulate land uses that can degrade ground water quality. The goal of source water protection is to maintain current water quality for the future despite the changes we can expect with population growth in North Idaho.

Assistance.

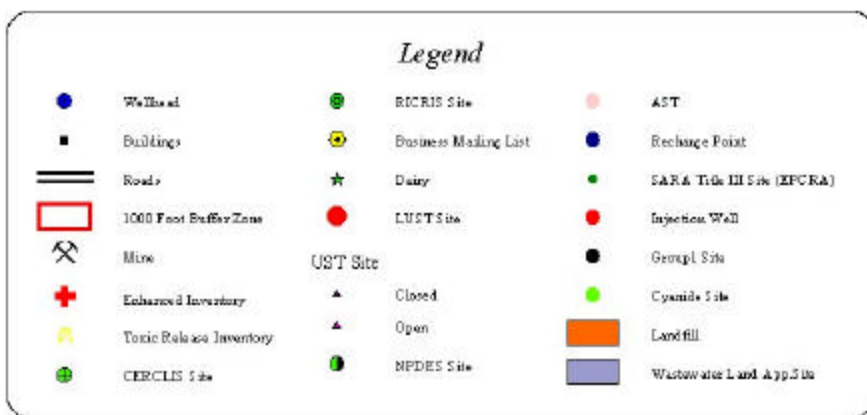
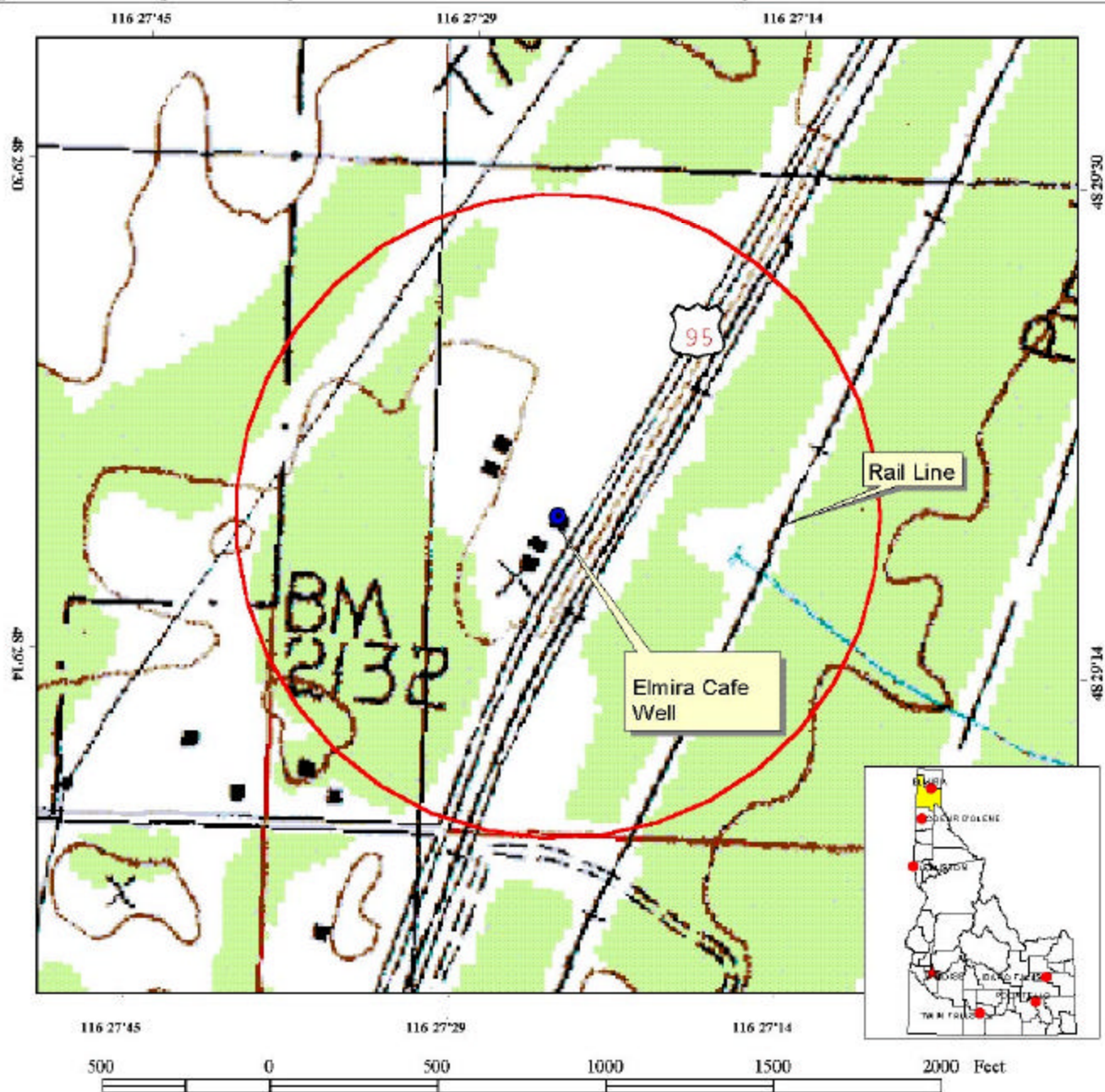
Public water suppliers and users may call the following IDEQ offices with questions about this assessment and to request help with drinking water protection planning.

Coeur d'Alene Regional DEQ Office (208) 769-1422

State IDEQ Office (208) 373-0502

Website: www.deq.state.id.us/water/water1.htm

Figure 1. Elmira Cafe and Grocery Delineation and Potential Contaminant Inventory.



PWS # 1090041
Elmira Cafe and Grocery
Well

Ground Water Susceptibility

Public Water System Name :

ELMIRA CAFE AND GROCERY

Well # :

WELL

Public Water System Number :

1090041

8/21/02 8:28:02 AM

1. System Construction		SCORE			
Drill Date	UNKNOWN				
Driller Log Available	NO				
Sanitary Survey (if yes, indicate date of last survey)	YES 2001				
Well meets IDWR construction standards	NO	1			
Wellhead and surface seal maintained	YES	0			
Casing and annular seal extend to low permeability unit	UNKNOWN	2			
Highest production 100 feet below static water level	NO	1			
Well protected from flooding	YES	0			
Total System Construction Score		4			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	YES	0			
Vadose zone composed of gravel, fractured rock or unknown	UNKNOWN	1			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	NO	2			
Total Hydrologic Score		4			
3. Potential Contaminant / Land Use - Sanitary Setback Zone (50 foot radius)		IOC	VOC	SOC	Microbial
		Score	Score	Score	Score
Land Use	RURAL	1	1	1	1
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Sanitary Setback	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score Sanitary Setback		1	1	1	1
Potential Contaminant / Land Use - 1000 foot radius					
Contaminant sources present (Number of Sources)	YES Transportation Corridor	1	1	1	1
(Score = # Sources X 2) 8 Points Maximum		2	2	2	2
Sources of Class II or III leacheable contaminants or Microbials	YES	1	1	1	
4 Points Maximum		1	1	1	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - 1000 foot radius		3	3	3	2
Cumulative Potential Contaminant / Land Use Score		4	4	4	3
4. Final Susceptibility Source Score		9	9	9	9
5. Final Well Ranking		*High	Moderate	Moderate	Moderate

The final scores for the susceptibility analysis were determined using the following formulas:

- 1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.27)
- 2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.35)

Final Susceptibility Ranking:

- 0 - 5 Low Susceptibility
- 6 - 12 Moderate Susceptibility
- > 13 High Susceptibility

POTENTIAL CONTAMINANT INVENTORY LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as ? Superfund? is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.